



RISK FACTORS

1. Pitching While Fatigued

Watch for signs of fatigue during a game, during a season, and over the whole year. The American Sports Medicine Institute (ASMI) found that adolescent pitchers who undergo elbow or shoulder surgery are 36 times more likely to have routinely pitched with arm fatigue.

2. Throwing Too Many Innings over the Course of the Year

ASMI found that players who pitched more than 100 innings in at least one year were 3.5 times more likely to be injured than those who did not exceed 100 innings pitched. Every inning -- whether it be during a game or showcase event -- should count toward that threshold.

3. Not Taking Enough Time off from Baseball Every Year

ASMI also found that pitchers who competed more than 8 months per year were 5 times as likely to suffer an injury requiring surgery. Pitchers should refrain from throwing for at least 2-3 months per year and avoid competitive pitching for at least 4 months per year.

4. Throwing Too Many Pitches and Not Getting Enough Rest

Daily, weekly and annual overuse is the greatest risk to a youth pitcher's health. Numerous studies have shown that pitchers who throw more pitches per game and those who do not adequately rest between appearances are at an elevated risk of injury. While medical research does not identify optimal pitch counts, pitch count programs have been shown to reduce the risk of shoulder injury in Little League Baseball by as much as 50% (Little League, 2011). The most important thing is to set limits for a pitcher and stick with them throughout the season.

5. Pitching on Consecutive Days

Pitchers should avoid pitching on consecutive days, if possible, irrespective of pitch count. According to Yang et al., pitchers who pitched on consecutive days had more than 2.5 times greater risk of experiencing arm pain, compared with pitchers who did not pitch on consecutive days.

6. Excessive Throwing When Not Pitching

A pitcher should not also be a catcher for his team as it is the next most throwing-intensive position and results in far more throws than players at other positions. ASMI found that amateurs who played catcher while not pitching were 2.7 times more likely to suffer a major arm injury.

7. Playing for Multiple Teams at the Same Time

Players who participate on multiple teams at the same time are at an increased risk of injury as it makes it more difficult to monitor pitch limits and results in reduced rest.

8. Pitching With Injuries to Other Body Regions

Players should be cautious about returning to play after any injury. A sprained ankle or oblique strain can imperceptibly affect the player's biomechanics, changing the way he throws and putting more stress on his arm.

9. Not Following Proper Strength and Conditioning Routines

While often overlooked, any strength and conditioning program should include a shoulder and elbow component. Numerous studies have shown that deficits in upper extremity strength and mobility are strongly correlated to serious arm injuries.

10. Not Following Safe Practices While at Showcases

A showcase can be a terrific opportunity for young players to demonstrate their skills for college coaches and professional scouts. However, pitching in a showcase during the offseason can be particularly hazardous, as it is difficult to get back to healthy game condition and it also makes it difficult to get sufficient offseason rest. Pitchers should treat these appearances as they would any other game for purposes of daily, weekly and annual pitch count limits. Furthermore, they should avoid the temptation to overthrow in an attempt to make a favorable impression.

11. Throwing Curveballs and Sliders at a Young Age

While existing research has not consistently shown a strong connection between the curveball and injuries, Yang et al., found that amateur pitchers who threw curveballs were 1.6 times more likely to experience arm pain while pitching and Lyman et al, found that youth pitchers who throw sliders are 86% more likely to experience elbow pain than those who do not (Lyman et al., 2002).

12. Radar Gun Use

While radar guns do not directly cause harm to a young pitcher, they can inspire pitchers to throw harder, oftentimes beyond their normal comfort level, in an attempt to impress others. This may create additional strain on the arm.

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